

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A JPEG2000 coding apparatus for generating JPEG2000 file comprising:
 - a JPEG2000 coder which codes an image data to convert it to JPEG2000 file;
 - an area discriminator which discriminates an area defined by each object contained in said image data and specifies type of the object;
 - an XML data producer which performs character recognition processing on the area discriminated as that containing a character by said area discriminator to produce a text data and produces an XML data corresponding to said text data; and
 - an XML box adder which ~~[[adds]]~~ positions an XML box that can store a specific data into a bit stream constructing said JPEG2000 file based on a relation to data corresponding to ~~so as to be positioned in back of~~ a predetermined level of wavelet decomposition and causes said XML box to store said XML data produced by said XML data producer.
2. (Currently Amended) A JPEG2000 decoding apparatus for receiving and decoding a JPEG2000 file produced by a JPEG2000 coding apparatus described in claim 1, the JPEG2000 decoding apparatus comprising:

a JPEG2000 decoder which decodes JPEG2000 file to convert it to an image data;

a selector ~~which causes~~ configured to allow a user to select whether to read an XML box added into a bit stream of JPEG2000 file in the middle of JPEG2000 decoding executed by the JPEG2000 decoder; and

an XML data processor which processes the XML data stored in the XML box to acquire a text data.

3. (Original) A JPEG2000 coding apparatus for generating JPEG2000 file comprising:

a JPEG2000 coder which codes an image data to convert it to JPEG2000 file;

an area discriminator which discriminates an area defined in each of objects contained in said image data and acquires a position information of the area;

an XML data producer which produces XML data corresponding to position information of each area discriminated by the area discriminator;

an XML box adder which adds an XML box that can store a specific data into a bit stream constructing said JPEG2000 file and causes said XML box to store said XML data produced by said XML data producer.

4. (Original) A JPEG2000 decoding apparatus for receiving and decoding a JPEG2000 file produced by a JPEG2000 coding apparatus described in claim 3, the JPEG2000 decoding apparatus comprising:

a JPEG2000 decoder which decodes a JPEG2000 file;

a position information acquirer which acquires a position information of each area discriminated by the area discriminator based on the XML data stored in the XML box added into each JPEG2000 file;

a coded data specifier which specifies coded data in each JPEG2000 file corresponding to each area based on the position information acquired by the position information acquirer; and

a coded data cutter which cuts off a part of the coded data specified by the coded data specifier.

5. (Currently Amended) The JPEG2000 decoding apparatus of claim 4, wherein the coded data cutter acquires only a part of the coded data specified by the coded data specifier, the part of coded data having resolution sufficient to index display, and forms an index file with the acquired coded data.

6. (Currently Amended) The JPEG2000 decoding apparatus of claim 5, further comprising an XML box adder which adds an XML box to the index file and ~~cause~~ causes the XML box to store ~~[[an]]~~ information data for permitting to specify a source file from which each area constituting the index file is ~~retracted~~ extracted,

wherein the JPEG2000 decoder decodes the source file corresponding to ~~the~~ a selected area in response to selecting ~~each~~ the selected area on the image index displayed.

7. (Currently Amended) A JPEG2000 coding method for generating JPEG2000 file, comprising steps of:

coding an image data to convert it to JPEG2000 file;
discriminating an area defined by each object contained in said image data and specifying type of the object;
performing character recognition processing on the area discriminated as that containing a character to produce a text data and producing an XML data corresponding to said text data; and
adding positioning an XML box that can store a specific data into a bit stream constructing said JPEG2000 file ~~so as to be positioned in back of~~ based on a relation to data corresponding to a predetermined level of wavelet decomposition and causing said XML box to store said XML data.

8. (Currently Amended) A JPEG2000 decoding method for receiving and decoding a JPEG2000 file produced using a JPEG2000 coding method described in claim 7, the JPEG2000 decoding method comprising steps of:

decoding JPEG2000 file to convert it to an image data;
~~causing user to select~~ selecting whether to read an XML box added into a bit stream of JPEG2000 file in the middle of JPEG2000 decoding; and
processing the XML data stored in the XML box to acquire a text data.

9. (Original) A JPEG2000 coding method for generating JPEG2000 file, comprising steps of:

coding an image data to convert it to JPEG2000 file;
discriminating an area defined in each of objects contained in said image data and acquiring a position information of the area;

producing XML data corresponding to position information of each discriminated area;

adding an XML box that can store a specific data into a bit stream constructing said JPEG2000 file and causing said XML box to store the produced XML data.

10. (Original) A JPEG2000 decoding method for receiving and decoding a JPEG2000 file produced using a JPEG2000 coding method described in claim 9, the JPEG2000 decoding method comprising steps of:

decoding a JPEG2000 file;

acquiring a position information of each discriminated area based on the XML data stored in the XML box added into each JPEG2000 file;

specifying coded data in each JPEG2000 file corresponding to each area based on the acquired position information; and

cutting off a part of the specified coded data.